

Abstract

**[0029]** An integrated bee monitoring system for monitoring bee colonies in a hive is described. The system has a central microprocessor, at least two input transducers and at least two output signals. Input transducers include sensors which report the status of the colonies including colony weight, temperature, and relative humidity. A bee counter can also be included in the system to indicate colony activity. A bee counter is disclosed which uses an amplifying, multiplexer hysteresis and debounce circuitry to enable rapid and accurate polling of a single passageway. Information collected can be retrieved by read-out or liquid crystal display. Alternatively, information can be retrieved by telephone line or wireless communications. The bee monitoring system also can remotely control peripheral devices such as feeders or chemical samplers.